

Amendment
Application No. 10/645,684
Docket No. DP-310121
Page 3

Claim Listing

1. (Currently Amended) A controlled suspension system for use between a ~~truck~~ vehicle cab or the like and an associated vehicle frame comprising:

(a) a strut module adapted to be attached at one end to ~~a truck~~ said cab and at an opposite end to ~~an~~ said associated vehicle frame, said strut module including an air sleeve capable of being selectively pressurized, an inner tube, an outer tube concentric with said inner tube, and a bearing sleeve positioned between said inner tube and said outer tube, whereby said bearing sleeve distributes a bending moment applied to the ends of said strut module;

(b) said strut module including a height sensor for measuring a distance between said ~~truck~~ cab and said associated frame and generating a signal ~~indicating~~ indicative thereof; and

(c) a controller for receiving said signal from said height sensor and selectively pressurizing said air sleeve;

(d) whereby said distance between said cab and said associated frame is maintained within desired limits by selective pressurization of said air sleeve.

2. (Canceled)

3. (Original) The suspension system of claim 1 wherein said air sleeve is connected to said inner tube and said outer tube.

4. (Original) The suspension system of claim 3 wherein said air sleeve is concentric with said inner tube.

5. (Original) The suspension system of claim 4 wherein said air sleeve includes a flexible portion connected to said outer tube.

Amendment
Application No. 10/645,684
Docket No. DP-310121
Page 4

6. (Currently Amended) The suspension system of claim 5 wherein said air sleeve includes a relatively rigid portion ~~connection~~ connected to said inner tube.
7. (Original) The suspension system of claim 6 wherein said relatively rigid portion is concentric with said inner tube.
8. (Canceled)
9. (Original) The suspension system of claim 2 wherein said strut module includes a three-point connection adapted to interconnect said cab and said frame, whereby said three-point connection resists relative lateral movement between said cab and said frame.
10. (Currently Amended) The suspension of claim 1 wherein said frame includes a transverse frame element and said strut module is adapted to be attached thereto.
11. (Currently Amended) The suspension system of claim 10 wherein said strut module is adapted to be positioned at substantially a midpoint of said transverse frame element.
12. (Currently Amended) The suspension system of claim 11 wherein said strut module is adapted to be mounted on a downwardly-depending flange of said cab.
13. (Canceled)
14. (Currently Amended) The suspension system of claim 1 wherein said strut module includes a mounting flange adapted to make a two-point connection to one of said cab or said frame; and said controller is mounted on said mounting flange.
15. (Canceled)
16. (Currently Amended) The suspension system of claim ~~45~~ 30 wherein said height sensor includes a link connected to said strut module adjacent an end opposite said mounting flange.

Amendment
Application No. 10/645,684
Docket No. DP-310121
Page 5

17. (Currently Amended) The suspension system of claim ~~16~~ 30 wherein said end opposite said mounting flange is adapted to make a single point connection that, together with said two-point connection, makes a three-point connection between said cab and said frame, thereby resisting relative lateral movement between said cab and said frame.

18. (Currently Amended) The suspension system of claim 1 wherein said strut module includes ~~an MR~~ a magnetorheological strut and said controller is connected to said ~~MR~~ magnetorheological strut to vary the damping characteristics thereof.

19. (Currently Amended) A controlled suspension system for use between a ~~truck~~ vehicle cab or the like and an associated vehicle frame comprising:

(a) a strut module adapted to be attached at one end to a ~~truck~~ said cab and at an opposite end to an said associated frame, said strut module including a three-point connection adapted to interconnect said cab and said frame, whereby said three-point connection resists relative lateral movement between said cab and said frame;

(b) said strut module having an inner tube and an outer tube concentric with said inner tube and being shaped to form a slidable connection with said inner tube such that bending moments applied to ends of said strut module are resisted by and transmitted through said slidable connection between said inner tube and said outer tube;

(b)(c) a height sensor mounted on said strut module for measuring a distance ~~therebetween~~ between said cab and said frame and generating a signal indicative thereof; and

(e)(d) a controller mounted on said strut module for receiving said signal from said height sensor and selectively pressurizing said strut module;

(d)(e) whereby said distance between said cab and said associated frame is maintained within desired limits by selective pressurization of said strut module by said controller.

Amendment
Application No. 10/645,684
Docket No. DP-310121
Page 6

20. (Original) The suspension system of claim 19 wherein said frame includes a transverse frame element and said strut module is adapted to be attached thereto.
21. (Currently Amended) The suspension system of claim 20 wherein said strut module includes a mounting flange adjacent one end thereof; said mounting flange having a two-point connection; said two-point connection being a component of said three-point connection.
22. (Original) The suspension system of claim 21 wherein said two-point connection is adapted to be attached to one of said cab and said frame.
23. (Original) The suspension system of claim 19 wherein said controller is mounted on said strut module.
24. (Canceled)
25. (Currently Amended) The suspension system of claim 24 31 wherein said housing is positioned adjacent an end of said strut module; and said height sensor includes a link extending from said housing and attached adjacent to an opposite end of said strut module.
26. (Currently Amended) The suspension system of claim 25 31 wherein said strut module includes a strut having an inner tube, an outer tube and a bearing sleeve interconnecting said inner and outer tubes; and said link is attached to said inner tube.
27. (Currently Amended) The suspension system of claim 19 wherein said strut module includes ~~an MR~~ a magnetorheological strut and said controller is connected to said ~~an MR~~ magnetorheological strut to vary the damping characteristics thereof.
28. (Original) The suspension system of claim 19 wherein said height sensor is integral with said controller.

Amendment
Application No. 10/645,684
Docket No. DP-310121
Page 7

29. (New) A controlled suspension system for use between a vehicle cab and an associated vehicle frame comprising:

(a) a strut module adapted to be attached at one end to said vehicle cab and at an opposite end to said associated vehicle frame, said strut module including an air sleeve capable of being selectively pressurized, a strut having an inner tube, an outer tube concentric with said inner tube, and a bearing sleeve positioned between said inner tube and said outer tube, whereby said bearing sleeve distributes a bending moment applied to the ends of said strut, and wherein said air sleeve includes a flexible portion connected to said outer tube and a relatively rigid portion connected to said inner tube, wherein said relatively rigid portion, said flexible portion, said inner tube and said outer tube define a first air chamber of said air sleeve and said air sleeve includes a seal adapter that, together with said inner tube and said outer tube, defines a second air chamber;

(b) said strut module including a height sensor for measuring a distance between said cab and said associated frame and generating a signal indicative thereof; and

(c) a controller for receiving said signal from said height sensor and selectively pressurizing said air sleeve;

(d) whereby said distance between said cab and said associated frame is maintained within desired limits by selective pressurization of said air sleeve.

30. (New) A controlled suspension system for use between a vehicle cab and an associated vehicle frame comprising:

(a) a strut module adapted to be attached at one end to a vehicle cab and at an opposite end to an associated vehicle frame;

(b) said strut module including a height sensor for measuring a distance between said cab and said associated frame and generating a signal indicative thereof;

Amendment
Application No. 10/645,684
Docket No. DP-310121
Page 8

(c) a controller for receiving said signal from said height sensor and selectively pressurizing said air sleeve;

(d) whereby said distance between said cab and said associated frame is maintained within desired limits by selective pressurization of said air sleeve; and

(e) said strut module including a mounting flange adapted to make a two-point connection to one of said cab or said frame and said controller is mounted on said mounting flange, and wherein said strut module includes a housing mounted on said mounting flange, and said housing encloses said controller and said height sensor.

31. (New) A controlled suspension system for use between a vehicle cab and an associated vehicle frame comprising:

(a) a strut module adapted to be attached at one end to a vehicle cab and at an opposite end to an associated frame, said strut module including a three-point connection adapted to interconnect said cab and said frame, whereby said three-point connection resists relative lateral movement between said cab and said frame;

(b) a height sensor mounted on said strut module for measuring a distance between said cab and said frame and generating a signal indicative thereof;

(c) a controller for receiving said signal from said height sensor and selectively pressurizing said strut module; and

(d) said strut module including a housing containing said controller and said height sensor;

(e) whereby said distance between said cab and said associated frame is maintained within desired limits by selective pressurization of said strut module by said controller.